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ABSTRACT

A study examined facilities in Ontario, Canada, for the assessment and provision of augmentative communication devices as well as ongoing support to the augmentative communicator in his or her community. It also studied opportunities for all adult learners to "catch up" on basic education and specific opportunities for all adults to learn about new technology. These three areas of service provision were analyzed from a consumer's viewpoint to identify where and what the needs were and how they were met. The study was undertaken within a framework of increased public awareness, acceptance of needs, and positive government policies and support for programs that enable full participation. The Assistive Devices Program (ADP) comprehensively attended to the integration of clinic operation in conjunction with device funding, but the system was costly to administer. For adults over age 23, a variety of projects, services, and programs were available in a diffuse and uncoordinated way. Adult education agencies had two modes of operation--curriculum centered and client centered. The conclusion was that the best of adult education practice acknowledged the empowerment of individuals as the ultimate goal; the best of augmentative communication practice shared this view. Recommendations were made regarding the nature of service provision to people with disabilities, augmentative communication, and new technology awareness. (YLB)

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ACKNOWLEDGMENTS

I wish to express my thanks to the Trustees of the Winston Churchill Memorial Trust for giving me the opportunity to enrich my understanding of work in this field and to share that enrichment with others. My eight weeks in Canada were challenging, stimulating and thought provoking and I hope that in this report, and in other presentations I have made to colleagues about my trip, I have managed to communicate some of that excitement.

I would like to thank my chairman, Ian Flett, of the Scottish Centre for tne Tuition of the Disabled for allowing me time away from post to take up this feliowship. I would especially like to thank all the SCTD workers, voluntary and paid, who held the fort in my absence so ably and who welcomed me back so warmly.

I would like to thank my colleagues in Scotland who have done so much to share with me their understanding of work in this field; in particular Phil Odor and Sally Millar of the CALL Centre in the University of Edinburgh and Anne Lavelle of the Special Educational Needs Database in Glasgow as well as Graeme Creasey, Registrar at Edenhall Spinal Injuries Unit, who suggested that idea of applying for a Churchill fellowship in the first place.

I would like to thank all those in Canada, too numerous to mention, who were so willing to spend time with me and share ideas with me in the midst of very busy work schedules; in particular staff at the ACS and the Director, Penny Parnes, Shirley McNaughton (ESCI), Susan Gregory (COTA), Joseph Fassell (DADA), Jack Pearpoint and Marsha Forest (Frontier College

and Canadian Association for Community Living), Arthur Bull (Ministry of Citizenship and Culture and members of CILT (Centre for Independent Living, Toronto).

I would like to dedicate this report to my father, who first made me realise that computers need not be threatening but could be useful tools for learning, especially for those with special needs, and to my mother, who gave me every encouragement to have the confidence I needed to make the most of this opportunity.

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April 1988

Computer based communication has opened up to all of us new, and sometimes very swift, methods of transmitting, receiving, storing and exchanging information: word processing, database compilation, electronic mailing and computer conferencing are a few of the new ways in which information can be handled by those with appropriate skills and equipment.

If new technology is opening up new methods of communication to those who relied in the past on reading, listening, writing and talking, imagine what its potential is for those who have not previously had access to one or any of these communication modes. In a world which has come to rely, too heavily, on the printed word and verbal communication skills, those who find they have difficulty with any of the skills of reading, listening, writing or talking are often considered less able intellectually; this is partly because success in Western educational systems demands a high level of ability in handling these modes, but more importantly because, at the level of person-to-person interaction, not being competent in any one of these modes precludes effective and easy communication with others who use only these modes, and therefore find themselves disabled by their inability to use alternative modes. Computer based communication systems, in theory at least, provide a step towards equalising this uneven distribution of abilities.

But how much is the potential of new technology understood and appreciated by people with disabilities, those who live with them, those who provide services for them, those who make decisions affecting the quality of their lives? And what is being done in this field in Canada, particularly in Ontario, which we could learn from, in the UK and

especially in Scotland? Perhaps I need to begin by telling you a little about "where I am coming from", a North American phrase I took to on my travels because it captures so well the idea that living, working, thinking and being is a journey, a process of continual discovery.

I work as the national organiser of a small voluntary (not for profit) organisation in Scotland, the Scottish Centre for the Tuition of the Disabled. The primary aim of SCTD is to encourage and enable the integration of adults with disabilities into existing educational provision; recognising this is not always possible or appropriate, SCTD's regional organisers (themselves largely voluntary workers) find voluntary "tutors" from the local community to work on a one to one basis, with adults usually in the student's home, wherever that is, giving help and sharing skills in a wide variety of activities, ranging from traditional academic studies to the sharing of new interests and craft skills. SCTD works mainly with adults who have physical, sensory or communication impairments.

Since 1983 and the arrival of SCTD's first computer, to be available on loan to any SCTD student, I have developed a special interest in the area of new technology and its potential for improving the quality of life for some people with disabilities. As our computer loan service grew (to date we have acquired 12 computers of various kinds and dozens of people have borrowed them for a three month loan period - a report on the loan service is available from SCTD) all of us who work with SCTD became gradually more aware of the need for human support and advice at a local and accessible level to anyone wanting to find out more about how computers

could help them. Experience has shown us that adults with disabilities who wanted "to know more about computers" generally fell into two broad categories; those who had writing difficulties (or mobility difficulties) and wanted to learn to word process as an alternative to writing and/or a way into further training and employment, and those, fewer in number but much more complex in need, who were non vocal and wanted to explore the possibility of computer based augmentative communication techniques.

SCTD's volunteer tutors were being called upon to assist adults who wanted to use computers as a way of producing written material (for learning, training, employment, leisure purposes). SCTD's service was also under pressure from professionals, working with individuals with complex communication difficulties, to find local volunteer "tutors" who would support the learning of adults with such disabilities who had been provided with computer based communication devices: adults using computers as part of therapist derived rehabilitation programmes were also being referred to us for assistance. Frequently, SCTD received requests for help and advice about assessment for and provision of communication devices directly from disabled individuals who were outwith any institutional framework and who were not necessarily receiving support from any professional agency or individual. Such requests also came from professionals (speech therapists, occupational therapists, social workers, lecturers, neuropsychologists) who knew very little themselves about the potential of new technology and who did not have the time needed to become more informed. Wherever possible, in all of these cases above, we did try to adopt the principle of engaging the professional(s) and consumers involved in our attempts to deal adequately with the referral so that we were not only putting the individual person

with the disability in touch with the "package" of appropriate agencies who could begin to meet his/her needs, but we were also putting the professionals involved in touch with those same agencies, in the hope that when similar needs presented themselves in the future, there would be no need for our "brokerage" service again. However, it was the degree of ignorance we uncovered in ourselves as well as in other service providers, and amongst people with disabilities, which made me realise how far all of us working in this field have yet to go before we fully exploit the potential of new technology.

Spurred by feelings of personal inadequacy and frustration at the then apparent lack of any interdepartmental government policy and provision, I felt the time was right to find out more about how another country was tackling this problem. It was a problem several of the networks to which I belonged were becoming aware of (in particular the National Bureau for Handicapped Students and the National Special Interest Group) and from my membership of the locally based Lothian Special Interest Group, I knew that interesting and innovative work was being done in Canada and so it was to Canada,and in particular to Toronto, that I went to see what we could all learn from developments there.

I went specifically to look at:

(1) facilities for the assessment for and provision of augmentative communication devices with special reference to the provision of ongoing support to the augmentative communicator in his/her community.

(2) opportunities for all adult learners to "catch up" on basic education.

(3) specific opportunities for all adults to learn about new technology.

I felt it was necessary to look at these three areas of service provision if one were going to take a consumers's viewpoint and identify where and what the needs were and how they were met (or not met). For an adult with a disability who felt that computers might be able to help him/her and who wanted to do something about it, an understanding and awareness of the workings of at least these three "sets" of service providers (who, I discovered, do not necessarily have systematic links with each other anymore in Canada than they do in Scotland) would be essential to enable that adult to manage effectively the resources in his/her community.

One cannot comment on or learn from the specific services a country provides, however, without first taking account of the culture from which they have come and the attitudes which have shaped them.

The sharpness and clarity with which one sees things when one visits a country for the first time soon clouds and it is important to record that first picture because one may never be able to see things as clearly again. For that reason I would like to record here several of my anecdotal first impressions of Canada (or of Toronto, to be precise). I acknowledge that

the conclusions I draw may be simplistic but nothing in my eight weeks experience invalidated any of them.

Travelling on the ultra clean and efficient subway into the centre of Toronto on my first day, I noticed that at least one in three of the advertisements in the carriages were for voluntary organisations or self help groups of some kind, many of them focusing on the needs of people with disabilities. Out in the street every single intersection (major and minor) had a kerb cut (or contoured kerb) making life easy for anyone pushing a pram or a wheelchair and the information leaflet which I had picked up about city library services gave me full details (and not at the back in small print) of the wheelchair accessibility of local libraries and of the range of non print media which they carried. The programme for the evening's concert of the Toronto Symphony Orchestra advertised several other pending cultural events and clearly gave beside each listing an indication of to what extent the venue was wheelchair accessible (and the great majority were).

The week of my arrival in Canada, Rick Hansen had also arrived home, on the eastern seaboard. Spinal injured in an accident several years previously, he was now nearing the end of an eighteen month round the world wheelchair marathon, the "Man In Motion" tour. He had started his journey from his home town in British Columbia watched only by a handful of well wishers, but now as he arrived back in Canada for the last leg across country, the Canadian media and Canadian people were becoming increasingly involved with his achievement, and every day for the first two weeks of my stay, as he made his way across Canada, his progress financially and

physically was the first item on all news programmes and a front page article in the press.

Whilst acknowledging that his achievement may have given the impression to some that everyone in a wheelchair can become a superstar, and recognising that some of the subway ads could serve to reinforce the idea that people with disabilities deserve charity, this does not take away from the fact that there appears to be in Toronto, compared to Scotland, a far greater number of incidental opportunities for the general public to be aware of disability and its implications. In my first few days exploring I noticed significant numbers of people with disabilities either working in or using the offices, shops and public service buildings of the city, far more than one would have met here at home (where admittedly the great majority of our buildings are considerably older than those in Toronto). All these things struck me quite forcefully in my first few days though I quickly came not to notice them: but while these superficial observations diminished in importance, an awareness of deeper issues grew and certain "key words" began to emerge and they were **equity, participation, interdependence and consumer control.**

Equity is a key concept in Canadian society and politics and broad acceptance of this principle is probably at the heart of the generally good relationships that seem to exist between the many cultural groups who make up the Canadian nation. Canada has a Charter of Rights and Freedoms which pronibits discrimination on the basis of disability (not just in employment practices but in any way) and Canada has also given a fairly high profile to the United Nations Decade of Disabled Persons (at least a nigher profile

than we appear in the UK to have given). 1981, the International Year of the Disabled, also seems to have had much more impact as an event. A Special Parliamentary Committee on the Disabled and the Handicapped was established in 1980 (the year before IYPD) and the preface to its report 'Obstacles' states:

"The recommendations contained in these reports constitute a cornerstone in the federal approach towards integration of disabled citizens" and the report identifies in its opening paragraph that there are "two major kinds of obstacles faced every day by more than two million Canadians" and cites the second of these as "the attitudes of non disabled Canadians who tend to disregard the needs of disabled persons when planning" and the report then puts forward three principles to be embraced by all Canadians:

"Participation: Disabled Canadians must have the same opportunity to participate fully in all of the educational, employment, consumer, recreational, community & domestic activities which characterise everyday Canadian Society".

Responsibility: All Canadians are responsible for the necessary changes which will give disabled persons the same choice of participation that are enjoyed by those who are not disabled.

Self-Help: Disabled Canadians are often best able to help themselves through their own service and advocacy organisations".

The 'Obstacles' report also gave rise to a Secretariat on the Status of Disabled Persons, a government funded group who report directly to the Minister responsible for the Status of Disabled Persons.

Full participation in society is seen as both the right and the duty of all citizens. Canada has a very well developed consumer movement and it would seem to be on the strength of that the advocacy and self help groups for and of people with disabilities have built their own strength. When Jim Derksen, a leading Canadian campaigner in Disabled People's International, addresses readers of the COPOH report "Defining the Parameters of Independent Living" he writes "Dear Consumers" and I heard him explain how a turning point for the independent living movement in Canada had been the 1980 COPOH conference in Vancouver which laid the ground rules on independent living for the major 1981 International Conference of Rehabilitation International, where the rule of the medical professions over the lives of people with disabilities was seriously challenged for the first time.

Since 1981 consumers have established several independent living centres in various parts of Canada and many others are in the early formative stages, like the one in Toronto. Significantly, the first ILC was conceived and funded by the Mennonite Central Committee in Kitchener, Ontario, where there is a large Mennonite population, people known for their self reliance and keen sense of social justice.

It is also interesting to note that the Independent Living Movement in Canada has already been through the stage where people with disabilities declared that only other people with disabilities should be involved with them in planning and providing services. Now **interdependence** rather than independence is the key word and people with disabilities are acknowledging that they need to work together with the nondisabled who share their common goals of trying to break down barriers and change attitudes.

In particular, the growing power of the seniors lobby (early retired and retired citizens) in Canada is likely to be advantageous to people with disabilities who often face the same problems of fragmentation of services and inflexible provision.

Returning to the concept of full participation, a cornerstone of the pressure for full participation is the commitment to deinstitutionalisation, and most importantly not deinstitutionalisation to a community empty of services and unwilling or unable to help or unaware of needs, but to a community where integration, properly supported and resourced, is a real possibility. The COPOH report states:

> "there is some misunderstanding about the connection between independent living and deinstitutionalisation. Some seem to believe deinstitutionalisation encompasses all of independent living. This, however, is not the case.., deinstitutionalisation does not address the question of individual empowerment. Peer counselling, advocacy and information and referral are not components of deinstitutionalisation. Deinstitutionalisation does not address direct **consumer control** or the involvement of disabled people in service delivery".

As we move rapidly towards deinstitutionalisation in this country, this statement needs to be borne in mind. One of the keynote speakers at the Canadian Rehabilitation Council for the Disabled Conference in Quebec on Living Independently in the Community, Judith Snow, a woman who had lived for years in what she described as a "squash court" of a longterm hospital ward and who is now, thanks to her efforts and the efforts of able bodied influential individuals in the community, now living independently, challenged the major funders of service provision to think in terms of rechannelling those funds directly to the consumers, and indeed the Minister for Health, who addressed the final session at that same conference, made it plain that any rehabilitation professionals or other service providers going to him for funding would have to show that they had actively involved people with disabilities in the planning of their proposals.

The power of the consumer movement in relation to people with disabilities is seen most clearly in recent developments within the community of those labelled "mentally handicapped". Groups like People First and the Integration Action Group/parents in Ontario (who are bringing test cases to the courts to establish the rights of their children to adequately supported integration in education as outlined in 1982 legislation) and services like ARCH (Advocacy Resource Centre for the Handicapped, an organisation staffed by lawyers and people with the "mentally handicapped" label) are all indications of a healthy degree of consumer advocacy: these organisations, together with independent living centres and other advocacy groups, also take their role as educators very seriously, and through the establishment of Speakers Bureaux and regular

open workshops, as well as through their constant and skilful use of the media, are doing a great deal to increase the awareness of the general public. The value of a policy of integration from day one for children with special needs is as forcefully argued by Marsha Forest, another keynote speaker at the CRCD conference, who pointed out how much "able" children would learn from the experience and who spoke about the ways in which "support circles" of their peers could be established for any child with a special need about to start mainstream schooling, rather like the informal "Joshua Committees" of interested and able adults in the community which she and Judith Snow of the Canadian Association for Community Living both suggested was one practical approach to enabling adults living in institutional care to begin the process of moving out.

Voluntary organisations which previously provided separately for children with special needs (like the Easter Seal Society) are now beginning to shift their bases to provide resources and support to mainstream educators, but it is acknowledged that there is still a long way to go. However, it was extremely encouraging to see that the very real power of consumers with disabilities and those who work with them ensures that legislation does become reality.

For those in the U.K. who are involved in making the spirit of the Disabled Person's Act (1986) a reality this is heartening news. Tom Clark's Bill, as it is popularly known, has produced a significant piece of legislation, significant because rather than laying an obligation on local government to provide services, it gives rights to people with disabilities to ask for services. However there is still a long way to go before we

reach a situation here comparable to that in Canada, where, for instance, minority groups pressing for their rights under the Charter of Human Rights and Freedoms are actualiy eligible for Government finance to aid them in putting their case.

It is within this framework of increased public awareness, acceptance of needs and positive government policies and support for programmes that enable full participation, that I would like to place my report. Whilst not wanting to give the impression that notning more remains to be done in Canada, it is encouraging to see that as a society they are further along the road towards the reality of full participation than we are, and encouraging to hear from them that it has not always been so, and that these developments are very recent. The concept of interdependence is one all of us disabled or not, consumer or provider, have to take on board because it means changes in attitude for all of us.

In Canada, there are three levels of government; federal, provincial and municipal, and various forms of cooperative funding across those levels together with input from "not for profit" organisations (the voluntary sector) provide for the health welfare, social cultural and educational needs of the citizens.

In Ontario the Ontario Health Insurance Plan (OHIP) to which everyone contributes whether in work (by contributions deducted from pay) or out of work (by credits) provides much of the funding for health care, and although health care is ultimately a federal responsibility, it is provincially administered, budgeted, planned for and delivered. It is the largest spending department of provincial government and as an issue of concern among citizens it probably rates as one of the most important. Although Canada does not have a welfare state that is exactly comparable to ours, it does have many more tax based public services than the USA and is much more like the U.K. than the U.S. in the way in which the government provides for the welfare of its citizens.

Interestingly, education, unlike health, is not a federal responsibility and Canada remains "the only developed country in the world without a national office or department of education". Provinces do not have the equivalent of local education authorities either, but instead schools in Ontario are run by hundreds of individual school boards. That apart, Ontario's budget for 1987-88 shows a projected 19% of total expenditure on education, 13.6% on social services and 32% on health.

In the field of augmentative communication, the first most striking and enduring contrast between provision in the U.K. and provision in Ontario, is that it is the Ministry of Health funded clinics and centres and health professionals who are leading the way in developing services and education, as a service provider, is lagging behind. Like the UK, however, services for children (assessment, prescription, support and associated research and development work) are much more embedded into statutory provision than similar services for adults which, like the UK, tend to be fragmented, partial, diffuse and not part of any coordinated or coherent policy.

In Ontario, the Ministry of Health funds one key "programme" which is the statutory basis for the provision of "certain medically necessary aids, equipment and supplies "to everyone with a disability up to the age of 23. This is known as the Assistive Devices Programme or ADP. This programme was introduced in 1982, officially as the result of IYDP year, but in reality because the provincial government could no longer ignore the lobby of voluntary organisations and advocacy groups to meet the unmet needs of many individuals with disabilities. The programme was drafted in such a way that it did not authorise the prescription of specific items but instead attempted to be generic and wide enough to meet the needs of the individual. In 1982, the ADP assisted individuals and their families with 75% of the purchase of hearing aids, visual aids, wheelchairs, orthotic and prosthetic devices, genito-urinary and ostomy supplies and respiratory equipment. It provided for young people up to the age of 19. Now, in 1987, that age limit has been raised to 23, and continues to increase by one year every year, and more importantly, since 1984, it has included communication

aids. The ADP will "contribute towards the cost of communication aids which would assist people whose communication, either written or oral, is not adequate to meet their needs". (Guide to ADP, published by Ministry of Health, Ontario). In other words, the Ministry of Health acknowledges that the right to communicate is an essential human right, at least as important as the right to mobility, and sees nothing unusual in considering communication aids, including computer-based devices, as "medically necessary equipment".

It must be said that this view has a great deal to do with the willingness and readiness of Betty-Jean Macdonald, Coordinator of the Assistive Devices Program, to listen to what Penny Parnes, Director of the Augmentative Communication Service in the Hugh MacMillan Medical Center, and her staff and other colleagues like Shirley McNaughton in the Blissymbolics Institute working in the field of augmentative communication had to say about how such aids could benefit severely communication impaired children. There are lessons here for those of us in Scotland and the UK who find that, at central government level, the policy makers in Health Departments, and at local government level policy makers in the Health Boards and Area Health Authorities, are often both unaware of the potential of new technology and resistant to the idea that health care providers may have a role to play in enabling individuals to communicate.

It is interesting, too, to see that the programme will meet the costs of aids to written as well as to oral communication. In general, any simple "off the shelf" communication aids a young person needs will be bought by the individual or his/her family with 75% of the funding coming from ADP

and will be chosen from a long list of "approved" devices.

But when what is needed is more complex, more costly, subject to obsolesence of the machine or to obsolescence caused by changes in the clients' needs, then equipment, instead of being bought by the individual, is purchased by the augmentative communication clinic and leased to the individual. The introduction of the Assistive Devices Program has enabled the Ministry of Health to set criteria for those clinics which are authorised to prescribe communication devices. Clinics are classified as either "general" or "specialist" and ACS is a specialist clinic.

ADP has also brought together service delivery and funding. As Penny Parnes states at the end of a paper on Funding and Service Delivery (1987) "the overwhelming strength to the system in Ontario is that it (the model for service delivery) comprehensively attends to the integration of clinic operation in conjunction with device funding". The ADP has achieved a high degree of credibility, particularly in the field of augmentative communication, because of its attention to "quality control" at all stages in the process (assessment, purchase, usage). Processes like the "peer review" to which all designated augmentative communication clinics will have to be subject have helped a great deal in ensuring the understanding and therefore the support of medical consultants. Penny Parnes writes very clearly of the current issues in funding and service delivery and I would like to quote at length from her paper written in 1987 and presented at the National Planners Conference on Assistive Device Service Delivery. I have drawn attention to particular points of interest to us in the UK by underlining certain statements.

"One of the major innovations associated with this program has been the close attention to service delivery as a necessary partner in the provision of devices. Hence a system of clinics and clinic levels is also being developed. The provision of devices coupled with appropriate services to assure excellent assessment, training and follow up services is being undertaken on a province wide basis. Hence a comprehensive system is being developed and implemented to service a population base of approximately eight million and a geography which stretches some 2000 miles from north to south and 1500 miles from east to west.

This paper then will highlight the program as currently implemented, plans for further expansion and current issues and concerns.

Model/Approach

A. Device Funding

Currently assistive devices are funded through the Ministry of Health Assistive Devices Program and cover devices found on an "approved" list. Most devices covered through this program are purchased by the individual on a shared basis with the Ministry of Health paying 75% of the cost and the individual paying the additional 25%. Devices purchased in this fashion are typically considered as the property of the individual. Individuals can only acquire replacement or upgrade equipment following a specified time period-typically three years.

In the communication aids portion of the program the list of devices eligible for funding is extensive. It covers devices which are used as augmentatives to both face to face and written communication. The device list is constantly revised and expanded following a systematic protocol which examines both technical and clinical efficacy. Devices must be reviewed and recommended using the protocol by at least two authorized clinical/technical teams in order to be added to the approved list. A copy of the list as of December 1986 is found in Appendix A.

Devices on the list are classified as being either general augmentative communication devices (e.g. call bells, typewriters) or specialized augmentative communication devices) e.g., speech output devices, standard microcomputers). For the high technology devices found in the specialized portion of the list, an alternate arrangement of funding and supplying devices has been negotiated. This involves the leasing of equipment to clients. The mechanism for equipment lease involves the authorised augmentative communication centre purchasing the necessary equipment and being reimbursed by the government for 100% of the purchase cost. Appropriate equipment is then leased to the client utilizing the following formula: equipment is leased at 2% per month of the purchase cost of the device for prescribed hardware and 1% per month for prescribed software and expendible items such as switches. The total leasing cost is then covered in a split fashion with the Ministry of Health contributing 75% of the leasing cost and the individual paying the other 25%.

In implementing these leasing arrangements the client or family sign two contracts with the Centre. One is a contract which acknowledges their responsibility for the 25% of the leasing costs (often covered through

charitable agencies such as the Easter Seal Society or the March of Dimes) the other is a clinical contract which is individualized to outline the clinical goals as negotiated between the client, family and clinical team and carries a clause stipulating the contract will be cancelled if the equipment is found to be unsuitable by either party or is being misused.

The rationale for leasing as opposed to purchasing in this portion of the program is outlined. Through leasing, equipment made available to the client can be revised at any time without additional major financial expenditure on the part of the client/family. In exchange for the lease fee, the clinic undertakes responsibility for the administration of the program as well as for on-going maintenance of the equipment. This in part addresses the problem of servicing unique constellations of equipment over a large geographical area. The problem of clients being left without equipment is also addressed, as the clinic will send replacement equipment if the necessity to return equipment for repair arises. The Ministry of Health system benefits in that equipment no longer useful to one client can be recycled to another as opposed to being left with original client. The major benefit is that as new technology emerges or as the needs of the client and his/her environment change, new equipment can be tried in the home environment, the prescribed equipment can be altered without major financial burdens to the client, and the original financial commitment of the family is much reduced as shown in the following chart.

Example of Equipment Lease

Equipment	Purchase Cost	Lease Cost Annual	Ministry of Health Portion Annual	Client Portion Annual
Hardware	$4,000.00	$960.00	$720.00	$240.00
Software	500.00	60.00	45.00	15.00
Totals	$4,500.00			$255.00

Client Portion $1,125.00

(25%)

B. Clinic Funding

Devices approved for prescription can only be prescribed through a small number of authorized clinics. Clinics are designated as being either general or specialized augmentative communication clinics and their prescriptive authorities are linked to this designation. In 1986 operating funds were made available to five of the six specialized clinics to assure that appropriate clinical and technical teams were available to assess clients, prescribed devices and implement appropriate intervention strategies. Operating funds per clinic ranged from approximately $60,000 to $525,000 per annum. These operating funds are on-going.

Plans are currently underway to implement this designation through a joint peer review and Ministry of Health review process. A new system has been developed which will authorize clinics, as well as individual practitioners, at one of four levels. Guidelines are being implemented to add new clinics in the province in a more systematic fashion. The hierarchical nature of the system will allow clients who present as the most difficult to serve to move up the system to more sophisticated clinics. These sophisticated clinics will in turn be responsible for networking with less advanced clinics to assure transfer of information and the on-going development of expertise in the field.

The clinic guidelines developed attended to the following areas:

- appropriate interdisciplinary teams dedicated to the field
- appropriate location of clinics to assure clients provide a sufficient "critical mass" to maintain clinic expertise
- appropriate levels of education both in terms of professional training and public awareness (linked to a clinical facility)
- on-going research and development
- on-going device evaluation
- device modification, customization and development.

The specifications of the clinic levels/guidelines are found in Appendix B.

Strengths and Weaknesses of the Model

A. Strengths

The overwhelming strength to the system in Ontario is that it comprehensively attends to the integration of clinic operation in conjunction with device funding. Other comparable systems deal with one or the other. The system supplies necessary equipment to clients without imposing undo financial hardship on the family. This is particularly critical in Canada which has a socialized system of Medicine where devices and other medical services are rarely paid for personally. The system benefits both the clinical team and the client with its flexibility with respect to device prescription. It also carries a measure of quality assurance with the peer review process for clinic level authorization.

B. Weaknesses

The system is costly to administrate both provincially and locally. Provincially the government must process considerable documentation relative to clinic levels, authorized equipment, individual prescriptions and on-going leasing cost. Locally, clinics must devise a system to deal with large inventories for which they are responsible, most of which is located remote from the facility. The administrative and accounting

procedures necessary to implement and maintain leasing and maintenance portions of the program are extremely time consuming. The liberal nature of the program presents the potential for abuse in new pieces of equipment being added to the system or in individual clinics overprescribing. The concept of centre-owned equipment creates the concern that suddenly a large amount of government funded equipment could become obsolete in the event of major changes in technology.

Issues/Problems

Current obstacles being encountered in Ontario focus on one major problem. That being the lack of appropriately trained personnel across all the involved disciplines in augmentative communication (speech/language pathology, occupational therapy, special education, paediatric medicine and technology development). For the most part in Ontario the facilities involved in pre-service training for these disciplines do not offer any training in augmentative communication. This issue has been challenged through a position paper presented to the Ontario Ministry of Colleges and Universities outlining the problem and proposing several short and long term solutions.

A second major problem is the lack of co-ordination between the Ontario Ministry of Health and the Ontario Ministry of Education. Hence through the Ministry of Health program, devices are prescribed for home use by the client. It is often necessary, and appropriate, to assure equivalent equipment is available for use by the client in the school setting. This is particularly critical with the prescription of non-portable writing aids such as microcomputers. As the Ministry of Education does not have a comprehensive device delivery system this must frequently be negotiated by the clinical team on an individual basis dealing with the clients' local school board. This is a time consuming and difficult process.

A further issue, not unique to Ontario, is the concept of a specialized service such as augmentative communication being of necessity delivered through centres of excellence, usually located in major urban centres and providing a "critical mass" in terms of client load. This must be weighed against the benefits of local community based services which can work with clients in their home environment. Although the clinic levels being implemented in Ontario address this issue in part, a totally satisfactory solution has still not emerged. Other approaches including travelling clinics, mobile vans to network with local professionals and the possibilities of telecommunications are yet to be explored. This problem is faced throughout North America where large geographical regions are involved.

Recommendations

The model currently being implemented and expanded in Ontario is a comprehensive one addressing many of the problematic issues in the delivery and funding of augmentative communication services and devices. The model certainly seems worthy of evaluation and potential duplication by other funding/service delivery agencies."

It is interesting, if disappointing, to see that in Ontario as in the UK the different departments of Education and Health have some way to go before the can cooperatively provide for augmentative communicators. This is perhaps of special interest to us in the UK at this present time when the introduction of school boards will have implications we need to think ahead to. I have commented on some of the implications of this paper at the end of my report but two particular advantages of the leasing system are worthy of note here. The cost to the client is minimal but the client and his/her carer/family have a contractual obligation to work with the clinic on the setting and achieving of goals. There is no doubt in my mind that the Augmentative Communication Service of the Hugh MacMillan Medical Centre is the leading clinic in North America and its director and staff are well aware that "all eyes are on them". In particular, since the clinic moved onto "hard" rather than "soft" funding and now has expanded to a staff of 31 from the original 7 of the early '80's, there is pressure on them to lead the way.

From its inception, the distinctive feature of the ACS (the Augmentative Communications Service), has been its client centred approach. ACS have adopted a vigorous policy of providing short term specialist intervention to the client and have backed this up with a range of what they call "facilitator support systems". Recognising from the beginning that it would be counter-productive to prescribe (for purchase or lease) expensive communication devices without also providing basic "facilitating" skills for the primary communication "partners" of their clients, and ensuring at the same time that all the "low technology" options for improving communication were being fully exploited, the team of staff at

ACS spent, and continue to spend, a great deal of time and effort in enabling "facilitators" to become skilled in using a whole range of communication strategies with their child. I say "with their child" because the clients of ACS are largely children and young people (up to the age of 23) so the "facilitators" are usually parents (though they can also be teachers or care workers).

When clients initially attend for assessment, part of the assessment procedure will involve the ACS consultant in observing the client communicating with one of his/her primary communication partners or facilitators (eg a parent or a teacher). On the basis of this observation, suggestions are made to improve the interactive use of "low tech" communication skills eg gesture, eye movement, facial expression. The goal of the assessment phase is to determine the communication needs and skills of the client and facilitators, and to investigate strategies and systems which meet those needs and utilise more skills.

In addition to the one to one work on improving clients and facilitators general communication skills, ACS holds regular facilitator training days, scheduled once a month, specifically designed for the families and professionals directly involved with ACS clients. Participants are grouped for sessions to promote discussions of clients with similar communication needs. Topics include an overview of augmentative communication systems and strategies for facilitating effective communication. The actual agenda remains flexible to address issues raised by participants. Facilitators are referred to the appropriate session by an ACS consultant. Agendas for two such days are reproduced in the appendix.

broadly they fall into two "levels", a basic day on establishing communication skills and a "higher" level day on developing communication skills.

When a child/client is at the point of being issued with a computer based device, then facilitators are required to attend a two day "computer facilitator training" workshop. This session provides instruction for day to day operation of the communication system and any special adaptive peripherals. Such sessions are scheduled several times a year and each session is comprised of one two day workshop for parents and one two day workshop for professionals. There is a fee for professionals but not for families. Typical agendas for these are also available from me (see end).

It is a requirement of any leasing arrangement ACS makes with a client that facilitators should attend training sessions, another advantage of the leasing concept.

Once someone is referred to ACS as a client they remain a client and their "case" is never closed, and so clients and their facilitators can come back at regular intervals for updates to their systems (hardware and software updated) and they are encouraged in between visits to maintain contact with their "named consultant" in ACS. Each client, on referral to ACS, is allocated a named consultant from the staff who remains their point of contact with the service. It was interesting to observe that despite the fact that ACS staff come from a range of professional disciplines (occupational therapy, speech therapy, education) none of them are "labelled" by their initial training but instead they are all referred to

either "instructors" or "consultants" (everyone starts as an instructor and then moves on to being a consultant when colleagues feel they have had sufficient experience in work with clients to merit that tag). All the time they are constantly learning from each other and sharing opinions and ideas with each other, whether as part of the assessment process for a client or at the regular weekly staff meetings they hold to discuss together clinical issues. Any recommendation for a computer based device made by an ACS consultant has to be approved by a "devil's advocate" group of three experienced ACS staff and the consultant has to argue the case for purchase.

Even though they now have a staff of 31, the waiting list continues to grow. The list is now drawn up in a computer database which takes into account not only date of referral but also factors such as age, need for admission, requests for multiple services and new school placements in determining waiting time. Efforts are continually being made to reduce the list, by developing new intervention strategies and by grouping clients, and by meeting some needs through workshop formats as well as through the development of expertise in local clinics and schools, and in a recent attempt to confine the list to the "more difficult to serve" client, initial telephone contact with an ACS consultant is established now prior to any written application being made to identify the problem and see whether referral can be made more appropriately to other local agencies, or whether ACS itself should take the referral further. ACS application forms are available from me - see end).

In its emphasis on facilitator support, as a central component of service delivery, ACS is moving towards the type of client centred provision encouraged by the independent living movement. The aim of ACS is to enable and empower individuals to communicate and express themselves, so it follows that of all the health based rehabilitation services it is pernaps the most keenly aware of the client's needs. ACS has encouraged and supported the growth of advocacy groups of and for augmentative communicators (see end) a particularly difficult goal to realise, and it campaigns vigorously for improvements in inservice and preservice professional training as well as for an extension of the service (and the ADP) to people of all ages. (Papers on these last two topics are available - see end).

Like the self help groups referred to in my introduction, ACS also takes very seriously its role as an educator of others and regular augmentative communication "orientation" days are held which are open to anyone interested in the field. All members of staff are expected to produce regularly research papers based on their clinical experiences which are made widely available through the various augmentative communication journals and publications.

In its dealings with the school boards who meet its clients educational needs, it has laid down a principle that if ACS is to provide a client with microcomputer based equipment for use at home via the ADP, then the school board must provide access to a similar piece of equipment in school. ACS does not, however, see its function as taking on the role of teacher, though it recognises teachers needs for professional support and

does invite them in, wherever appropriate, to facilitator training sessions, as it does residential care workers.

It is in fact to another organisation (which originally shared the same physical space as ACS in the Hugh MacMillan Medical Centre) the Blissymbolics Institute, now known as the Easter Seal Communication Institute, that ACS looks to provide a broad programme for educationists and school teachers who may, for the first time, find themselves having to cope with the learning needs of an augmentative communicator.

The ESCI runs an Educational Service Programme in which the primary aims are to:

- advance augmentative communication in ways which contribute to cognitive, social and emotional development and growth of individuals

- draw attention to the quality of the learning experiences of augmentative communicators

- assist augmentative communicators and their families

ESCI, whose parent organisation is a large not for profit body, the Easter Seal Society, staffs its Educational Support Programme with three special education teachers with experience of teaching augmentative communicators and runs a regular rolling programme of special interest seminars for those involved in the field of augmentative communication. One of the teachers I met when I attended a day "Orientation for Educators With An Augmentative Communicator in the Class" had come into the field via

teaching in a longterm residential home, followed by a post teaching life skills to young people with communication difficulties living in Bloorview Children's Hospital, in which one of the six clinics authorised to prescribe communication devices is based. This particular seminar was led by four ESCI staff, and contributions were also made by an augmentative communicator in her early twenties and her ex teacher. The participants numbered three teachers, one speech therapist and me. In the appendix at the end of this report are key statements made concerning the role of educators in augmentative communication. A list of the other seminar topics covered throughout the year is in the appendix. To enable the Ontario Ministry of Education to get some idea of the support needs of teachers, ESCI is currently offering free participation in its educational support programme to teachers from nine of the hundreds of school boards in the province. Teachers in other school boards have to pay for attendance. The Director, Shirley McNaughton, herself a teacher and in the early seventies responsible for the introduction of Blissymbolics as a means of communication for children in the Hugh MacMillan Medical Centre School, was aware as the ADP and the use of microcomputer based devices developed that teachers could well feel threatened by the presence of augmentative communicators in class, and it was from that realisation that the impetus for an educational service programme came. Currently she is approaching systematically all the school boards to market the ESP, whilst recognising that the most successful approaches are likely to come from discussing the needs of an individual child. However the close working links that already exist between ACS and ESCI, and are developing between them both and school boards, should ensure the emergence in time of a more coordinated approach to provision, for young people in schools at least.

Two key problems that educationists and health professionals in Ontario have to contend with are the lack of freely available special needs software (unlike the UK where the Special Education Micro Electronics Resource Centres have done so much to produce good material) and the fact that the Ministry of Education had chosen to purchase a computer called an ICON, designed in Ontario, as the standard issue for all schools. Unfortunately ICON were now experiencing severe production difficulties and look like going out of business. The small amount of software I saw was not free and was nothing like as well designed as the best of the UK's freely available software, and several Canadians agreed. ACS is in the process of building up a software library and ESCI are also going to start reviewing and recommending software via the newsletter they are about to launch for educationists interested in augmentative communication which will be going out to all schools. It might be interesting for ACS and ESCI to know more about the role of SEMERCS and SEND, the Special Educational Needs Database based in Scotland, and the services they provide to teachers in the U.K.

The Director of ESCI has recently initiated a very exciting and innovative project called the Susan Wilson scheme. Named after the late wife of the chairman of the Easter Seal Society, whose generous request provided the necessary finances, this is a training programme for four young adult augmentative communicators who are learning how to present to groups the topic of augmentative communication.

For one day a week over a period of weeks the four individuals involved are working on their individual strategies for presentation.

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Three out of the four are making personal videos which will introduce them to their audience. I was lucky enough to be in the audience when they did a trial presentation to the Communication Awareness and Action Group (the advocacy group I mentioned earlier) and it was most impressive. In this respect ESCI like ACS is uncovering the continuing learning needs of young augmentative communicators as they become adults. Simultaneously, they are empowering individuals, educating the general public and giving consumers control.

Before I move on to looking at facilities for adults I would just like to mention the particular type of service offered by another one of the clinics authorised to prescribe augmentative communication devices in Ontario. Bloorview Children's Hospital is an 82 bed childrens hospital and it has an Augmentative Communication Technical Aids Resource Centre which serves residents and other young people, under 23, across Ontario. Smaller and more informal than ACS, it too provides a multidisciplinary team who assess needs and as a centre it specialises particularly in assessment for writing aids. In its annual newsletter for 1986 it reported a current caseload of over 200 individuals and a waiting list of 60. Once again assessment does not involve only selecting an appropriate device. It also involves "consultation with and training of family and school teachers and specific instruction on usage of the child's communication system. Ongoing assessment and modifications of the program is an integral part of its planning. The involvement of the child's "support" people is imperative to effectively facilitate and implement a comprehensive communication program".

I hope the description of ACS, ESCI and Bloorview gives some indication of the nature and range of services to augmentative communicators under the age of 23 in Ontario. What about those over 23 who are communication impaired? Who provides for them and where and how? How do adults with other disabilities find out about the potential for them of new technology?

If we look first at the situation for adults who need specialised equipment to facilitate communication, the ADP cut off point at 23, even though it will increase by one year every year it is in operation, still leaves large numbers of communication impaired peopled unserved . Canada is experiencing the same population explosion of "seniors" (ie 50+) as most Western countries (and is also incidentally seeing an increasing incidence of Multiple Sclerosis and ALS). This means that increasing numbers of adults will be left unserved. This fact is recognised by the Assistive Services Branch and in the meantime the Ontario Advisory Council on the Physically Handicapped continues to press that the provincial health insurance plan (OHIP) be amended so that:

> "major external prosthetic orthotic and other essential assistive devices be furnished as an insured benefit, where such devices are prescribed by medical or other authorised personnel".

Professionals involved in meeting the needs of young clients are also, understandably, concerned and Penny Parnes has presented a paper on the need for an augmentative communication service for adults (see end) not least those young adults who are "graduating" by age out of ACS' remit. Whatever service does ultimately evolve to meet adults needs (particularly if it states from a "health" base where much of the vigorous development work is being done with children) it will have to reach out to and cooperate with the world of community based adult education and independent living centres, in recognition of the fact that as augmentative communicators grow up and become adults, changes should ideally take place, in the dynamic of their families, institutions, or service providers which

allow them as adults more control and enable them to become effective managers of whichever unique set of "support solutions" best meet their individual needs. This empowerment process is an idea shared by the best of adult education practice and the independent living movement. For adults with communication impairments who have never had an augmentative communication device the need for a well structured learning programme will be most sharply felt, but even early augmentative communicators will still have a lot to learn when they reach the age of 23. The 1986 publication "Profile of Disabled Persons In Canada" states that "adults reporting a disability tend to have received less formal education than non disabled adults: for Canada as a whole, 44% of those with a disability have eight or fewer years of schooling, compared to 17% in the nondisabled population. This disparity holds true even among all age groups, even the youngest: 17% of the 15-24 year olds who reported a disability have eight or fewer years of schooling, compared with 6% among nondisabled young people".

Although there are no services in Ontario with the kind of mandate for services to adults which ACS has for services to children, there are a variety of schemes, projects, services and programmes which do meet some of the needs and which have sprung up in a diffuse and uncoordinated way (and that is not a criticism of the programmes but a comment on the lack of a centrally coordinated policy for meeting adults needs in this area). Between them these schemes and projects have a variety of goals; to train for employment, to provide therapeutic recreational activities, to promote self help and to enable people to become more "computer literate". In addition there are number of initiatives directed at giving the general public (including adults with disabilities) a greater understanding of what

computers can do. These initiatives are, however, mainly centre based (ie they take place in a building to which one has to go) with the exception of TV Ontario's highly successful series "Computer Academy".

The diversity and diffuse nature of the scene for adults and the current lack of any "one stop shop" for information and advice is similar to the picture of provision in the U.K., although I formed a general impression that there was a greater degree of public awareness (including awareness amongst those with a disability) of the potential of computers. Certainly in relation to computer based augmentative communication the media in Canada have taken up the cases of several individuals, notably Justin Clark, a young man who presented his case (to fight for his independence from his parents who had placed him in an institution) in the courts using Blissymbols and a computer based communication device.

Perhaps the most innovative of the programmes I saw which provided a service to adults was the training for employment programme run by the March of Dimes (a major "not for profit" organisation which was conceived in the early fifties in response to the polio epidemic which swept Canada at that time). This scheme was particularly memorable because it was deliberately designed to meet the needs of adults with <u>significant</u> physical and communication disabilities (or "challenges"). The Micro Computer Applications Training Project (or MATP as it is called) is a vocational training programme which began life in 1983 in Bloorview Children's Hospital (in recognition that the young adults living there needed access to vocational skills as they moved out of hospital care) and was taken over in 1984 by the Ontario March of Dimes. The history of the MATP is described by a former staff member as follow:

"About two years ago, a number of agencies who were working with severely disabled adults began to look at the microcomputer as a means of helping their clients develop skills that would lead to jobs.

"Many severely disabled adults are non-verbal; they often have limited movements. In the past - because of their needs - they'd been classed as unemployable. But the microcomputer has overcome some of those physical limitations and is a tool they can use in a work environment".

"It turned out the Bloorview Children's Hospital, the Blissymbolics Communication Institute and the March of Dimes were all looking at similar kinds of microcomputer training. The agencies decided to cooperate. Because of its experience with vocational training for adults, the March of Dimes now co-ordinates and runs the program. All the agencies, including Vocational Rehabilitation Services, are represented on the program's Rehabilitation Advisory Council, a group that screens applicants and develops plans and policies.

"We wanted the training program to be business orientated", she explained, "and so, from the very beginning, business has been involved. Representatives from major corporations such as Apple, Communique - The Communications Company, IBM, Hewlett-Packard, Link Business Technology, Phillips Information Systems and Xerox form a Business Advisory Council. They help us with curriculum and program development. We need their advice to ensure that our training is geared to the needs of the marketplace.

"They work with the students on interview skills and resumes. They have also been instrumental in helping us talk to other businesses about possible placements for the students".

Four steps to employment...

The program piloted by the March of Dimes is divided into four phases. In the first phase, students spend six months in classroom instruction with the microcomputers. The focus is not on programming but on applications. The students learn to use software packages such as Wordstar and Multimate, Lotus 1-2-3 and dBASE III. Because they are being trained for employment in business, they use IBM computers: the type most commonly found in business environments.

The program is staff-intensive: four staff for six students provide highly individualized instruction. In addition, students are expected to assume a lot of responsibility for their own learning. They are taught that the skills they acquire in mastering one software package are transferable and will stand them in good stead in the workplace.

In the second phase of the program, students go out for a six-month placement. A field instructor travels between placements to support the students in their work, and the program provides attendance care for them.

"Most of the placements we've had so far have been within social service agencies", Ingrid Lehmann, Program Manager, explained. "We've had great support from Bloorview, Blissymbolics, Sunnybrook, the Metro Toronto Association for the Mentally Retarded, the Ontario March of Dimes and Participation House Apartments. However, we've also had placements in the

business community including North York City Hall, Aim Financial Planners and McGraw-Hill".

The six-month placement gives students practical working experience. They have the opportunity to apply their skills in a work environment, but they still receive the support they may need from the training program.

For the third phase of the program, students return to the Microcomputer Applications Centre. They consolidate their microcomputer skills and develop resumes and interview techniques. Their six months in the workforce will have given them a better idea of what type of work they want to do - and what other skills they may need to accomplish their goals.

During the third phase, students are also exposed to contract work. "This is part of our effort to give them experience in a broad range of vocational options", Lehmann said. "Some students may not be able to be accommodated in certain working environments, but they could do contract work from their homes. This gives them a chance to see what it's like".

Students spend the final six-month phase of the program back in the workplace, with some support and supervision from the program. If the final placement goes well, program staff hope that it will become a permanent job for the student.

Who gets into the program?

Ingrid Lehmann, Project Manager, stressed that the criteria for admission are fairly flexible. "We will take anyone who is really motivated, wants to work and possesses an aptitude for computer-related work. We are not set up to compete with the programs offered in community colleges of other institutions, but to accept those students who can't be integrated into a regular program. Most of our referrals comes from Vocational Rehabilitation Services. We insist that students make a two-year commitment to the programme. There are too many people who want to get into the program for us to accept someone who isn't strongly motivated.

"Because our ultimate goal is employment, it's essential that the students have strong language skills. Even if they are nonverbal, they have to be able to read and write at a certain level. In some cases, we offer tutoring in these skills, or we suggest they take some extra courses or training before entering the program. In fact, we've decided these skills are so important that we're including classes in business writing, letters and other uses of language that they are likely to need in the workplace".

The students are enthusiastic about the course. A student currently in phase three talked about her first placement: "I worked for six months at North York City Hall... and I didn't want to leave".

According to a student currently in phase one, the program represents a good opportunity. "We're learning about adaptations that can help us use a computer. We're also being taught skills that really are in demand in the workforce. I think the program will only improve - already the people running it are more aware of opportunities for employment".

Applied research...

John Langstaff, Manager of Scientific and Education Programs at IBM Canada and a member of the Business Advisory Committee, agrees. "What we're doing is applied research. We're breaking new ground and learning as we go. No one has yet tried to place students as severely disabled as the ones in this program in competitive employment situations. What we're doing now is difficult, but it will create opportunities for severely disabled adults in the future".

The Business Advisory Committee spent some time discussing the program's "learning curve". Before the first group has even graduated, the committee is adjusting the curriculum to help give students a more competitive edge. New students will receive more instruction in interview, job hunting and language skills. Guest speakers from the business community will be asked to visit the program and talk to the students. Course instructors are also going to be more demanding in terms of deadlines and productivity. "Students will have to face these expectations in the workplace", said Ingrid Lehmann, "so we should start preparing them now".

Program staff are collecting actual examples of work required by companies so that students can practice on "real-world" assignments. In addition, students who have graduated and are working will be able to come back to the program on weekends for help with specific job-related computer problems.

The future...

According to Jerry Lucas, Director of Program Development at the Ontario March of Dimes, there are still problems to overcome. Although the microcomputer will help the students compensate for some of their physical limitations, it will not meet all of their special needs.

One of the biggest concerns is attendant care. "Once students are working", Lehmann explained, "they'll be expected to pay the cost of their attendant care. That will mean at least $75 a week. Most new graduates will be starting at entry level positions and probably won't be able to afford that. Even if they can afford it, they may not be able to get access to the level of care they need. It's a problem we have to address immediately".

Lucas talked a bit about the operation of the program: "Although we're very pleased with the results of the program, we did not expect it to be so expensive and labour-intensive. The program has only four full-time staff, but to operate it properly, we've had to 'borrow' people and support from the Ontario March of Dimes. We are actually using about eight or nine people full or part-time - and that's with only three phases operational".

In spite of the problems and challenges, everyone involved in the program is extremely hopeful. The two students from the pilot project who are fully employed have proved that the program will work. Program staff and members of the Business Advisory Committee are confident that they can keep the curriculum in line with demands in the workplace. By concentrating on educating potential employers and marketing the students' skills, the

staff are helping to provide a route into the mainstream workforce for people who are severely physically disabled.

A two-year pilot project, the program was initially funded partially by the federal government. The Ontario March of Dimes itself has invested about $75,000. MCSS Vocational Rehabilitation Services pays the fees for each participant in the program, and the Applied Program Technology (APT) Unit provided funding and expertise to develop an evaluation for the first phase".

Speaking with the project manager, I discovered that a major problem in the early days of the project was that the business applications packages which formed the basis of the students learning material did not take account of the basic education or literacy and numeracy needs of the students, many of whom though intellectually able still had a lot of catching up to do in terms of literacy/numeracy skills. A review of MATP's needs in this area was conducted by an educational consultant from ESCI's Educational Services Programme, and the recommendations of her review (see Appendix) included provision of a more thorough literacy/numeracy assessment during pre screening, provision of a "preentry" session for those with some catching up to do and identification of the actual literacy and numeracy skills required by specific software packages. Clearly there is scope here for cooperative work with adult educationists and it is interesting to note that MATP had made connections with their local community college (further education college) who had agreed to award appropriate vocational certificates to the students. Perhaps they would in future become involved with the adult basic education input. At the end of the first two years of the project's life, although two of the eight students had found employment (one who was assessed for his communication device by ACS and one who was assessed by Bloorview) and two were "on trial" with employers, the other four were still seeking employment the time I was there and it was becoming clear that "for some, the severity of their disabilities limits their speed of operation and does not make employment in a competitive business setting a realistic goal" and as a result the Advisory Committee was proposing to establish an entity called Secretariat Enterprises which would operate as an "affirmative business" (concept similar to our sheltered placement scheme in the U.K.) offering

computer conferencing services and secretariat functions for small businesses and social service agencies and associations. At the time of writing this proposal was under discussion.

In the light of Edinburgh's Stevenson College recent initiative in this field (a two year training course in office related skills for young people with physical disabilities) the MATP experience may well provide some very interesting lessons. From my visit there I learned that the Vocational Rehabilitation Service (similar to the Disablement Advisory Service of the Manpower Services Commission) will fund the purchase of computer based equipment to enable someone to be employed but that, unlike the U.K. where it is the employer who receives the grant and the equipment, in Canada it is the employee who receives it (another example of consumer centred provision and surely something we would do well to parallel). This simple but telling difference in provision makes all the difference to the individual who is then not tied to that company for life!

All of the students on the MATP scheme were using IBM or IBM compatible machines and several were accessing them using an alternative (to the keyboard) input device called a PC Aid, designed by an organisation called DADA, Designing Aids for Disabled Adults (another not for profit organisation).

DADA began life as a technical aids and advice service in Toronto but quickly found itself involved in direct service giving. I am particularly grateful to DADA's Director of Community Services, Joseph Fassell, for the many and helpful contacts he made for me in the community of those working

with adults with disabilities. It was interesting to observe how quickly I found that the same names kept coming up as "people you must go and see". Just as in Scotland, the numbers of those working in the field of augmentative communication especially with adults are still small and everyone knows everyone else.

DADA's service is designed to meet the needs of adults with any disability (not just a communication impairment) and they run what they call a Computer Volunteer Program (see end) where they recruit, select and informally train volunteers from the local community to work with adults who want to know more about computers. Being essentially an urban service operating in one large city, the training of volunteers can be done on a group basis. Experience was also showing them that many disabled adults had needs for compensatory education in literacy and numeracy skills. Most of their volunteers come from the literate middle classes and many of them use computers in their workplaces (though not necessarily as programmers) and they were finding that in order that they could effectively pass on "computer awareness" to their student, the student often needed help with literacy and numeracy and at the time of my visit, the Volunteer Programme Scheme director was to meet with an adult educationist from the Ministry of Citizenship and Culture to discuss ways of building such provision into the programme.

One of DADA's volunteers is now employed (as a direct result of her volunteering experiences) as the manager of computer based facilities for residents at a long stay hospital. The hospital had asked DADA for a volunteer for two of its residents a couple of years ago and as a result of

her work employed her for a year to organise training and liaise with hospital staff. Some of the residents with whom she is working had, incidentally, been assessed for their particular aids by ACS.

Like several of our own computer using students in Scotland, much use was being made of the computer as a tool to write about the very personal experiences of disability, which in itself was both a therapeutic and a creative experience, particularly for individuals who find themselves in institutions. Hopefully the existence of client controlled computer based communication devices within institutions will allow individuals who may have very limited social contacts to join computer conferences and to subscribe to bulletin boards and so begin to break down the institutional walls.

The smallness of the augmentative communication world in Toronto became evident when I met one of DADA's "graduates" from the computer volunteer programme, a young girl with a disability, who is now employed as an administrative assistant at the Aids for Daily Living Centre in Sunnybrook Hospital where (yet another link) a member of staff from Frontier College (an adult basic education agency whose work I will refer to later) happens to be a student on the "Computerease Program"... (and also happens to use a wheelchair).

Intended for adults who are interested in acquiring basic skills and knowledge of microcomputers and their application for various purposes - vocation, education, recreation financial management - the Computerease Program is an "opportunity for adults with physical limitations living in

the community to learn about micro computers" (for more details see appendix). Computerease is staffed by sandwich course (or "coop") university students doing their industrial placements as is the Neil Squire Foundation Computer Comfort Club. Neil Squire, explains the information leaflet, "a 20 year old University of Victoria student and keen basketball player, became a quadriplegic as a result of a car accident in 1980. He had no movement from the neck down. Unable to talk or eat because of his dependence on a respirator, Neil faced many problems requiring technical solutions.

"A relative of Neil's, a robotics engineer, became interested in his plight and set out to improve the young man's quality of life. He designed a mouth-controlled apparatus that used morse code to activate a computer. The ability to communicate his thoughts to others, something we all cherish and take for granted, was lost for Neil the instant he was injured. Creative engineering gave him back the facility of private, confidential communication. Neil then assisted in developing new computer systems, encouraging others who faced similar problems.

"Neil inspired all those who came in contact with him, and after his death in April 1984, the drive he had started toward technical advancement produced the Foundation that now bears his name. With it has come an organized approach to research and development". The Foundation has established a computer comfort club which matches university students with disabled computer users and, like DADA, also works extremely hard to educate the general public in this area, giving a high profile to those adults who have been able to move on (into education/employment/community

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living) as a result of getting access to appropriate technology and support.

The absence of any coordinated approach to service provision for adults is probably the reason behind the existence of a multidisciplinary "special interest group" of community based professionals and consumers who meet regularly under the aegis of the Sunnybrook Aids for Daily Living Centre to discuss issues of common concern. The evening I attended a meeting there the group was discussing the possibility of setting up a bulletin board for homebound disabled computer users, and I felt that if I closed my eyes I could have been at home as our own special interest group in Lothian Region had recently been discussing the identical issue!

One of the members of this group was Susan Gregory, Assistant Director of COTA (Community Occupational Therapists Association). Established in the late seventies by a group of five hospital based occupational therapists, who felt there was an urgent need for a community based O.T. service (none existed at the time), COTA now employs over 90 OTS who work on a free lance basis for the Association supplying similar services to our own Social Work supported domiciliary occupational therapist service. Susan Gregory has taken a particular interest in the ways in which computers can be useful to people with disabilities living in the community and she now runs a computer loan scheme for COTA's clients, very like our own SCTD computer loan service, though the loan period for her service is 3 weeks compared to our 3 months. At the time of my visit she had 8 machines. The particular purpose behind COTA's involvement in this area has been to "demonstrate the use of the computer in the client's home as a remedial tool in the rehabilitation process of adults with

neurological conditions. Client centred consultation on computer technology and computer literacy is provided by a number of community based computer centres". In fact, Susan refers her computer borrowers for support to COTA's own bank of volunteers, to DADA, to day school computer literacy (and adult basic education) classes. Recognising her own need for more inservice training in this area, she had been one of the students at an experimental 10 week evening class programme run jointly by ACS and the University of Toronto for anyone interested in augmentative communication. (This experiment had not yet been repeated at the time of my visit as those running it had found the wide range of 'starting points' of the students, who came from many disciplines and had, in some cases, no direct experience made it extremely difficult to 'pitch' the content accurately).

Another member of this special interest group was Dorothy Netherwood, now Olivetti's representative in Ontario, responsible previously for managing an innovative open access computer awareness project, run at Toronto's up and coming Harbourfront complex, sponsored by the Ministry of Citizensnip and Culture (and including in its resources dozens of BBC machines)!

All in-all there was quite a lot of somewhat fragmented activity which adults with disabilities could tap into, if they were lucky enough to hear about these various schemes. The professionals involved in all these schemes were, more or less, all aware of each other's involvement and did refer clients to each other when appropriate but it is debatable whether the ordinary disabled member of the public, the consumer, had all the information at his fingertips, anymore that he or she would have here.

One of the fascinating realisations during my trip was that the two areas of activity I was interested in ("disability" and "adult education") began to merge imperceptibly, I think partly because service providers were really beginning to think and plan from the consumer's point of view. Many of the providers to adults with disabilities (DADA, COTA, MATP) commented on the fact that as their adult clients began to use computers effectively it became clear that many of them needed access to continuing adult basic education. This was perhaps most tangibly borne out in my visit to the Gage Transitional Living Centre.

I heard about the Gage at the CRCO Conference in Quebec and through DADA. Although sited in the grounds of West Park Hospital (long term hospital for the chronically sick and disabled) the Gage is a completely separate unit of supported independent accommodation for adults with disabilities who have been living in chronic care facilities. The aim of the Gage is to provide a transitional living space to enable individuals who have been living in long term care to gain the necessary skills and confidence to become effective managers of their own lives before moving out into the community. One of the major areas of need that both staff and residents had learned together in the first few months of this exciting project was not only that many of the residents felt they had 'gaps' in their basic education which needed filling, but, more importantly, they needed support in learning how to become an assertive and effective manager of their own affairs. Years of passivity had unconsciously undermined confidence and self esteem and it was not easy, for example, for residents who had been put to bed at the same time for years, to make their own choices about when they had had enough of the day. The Director of the

Gage felt what was needed was input from someone experienced in working with adults as learners who would be able to build confidence in new situations and so such a person, with an adult basic education background, was taken on. (It is worth noting that this need for people with disabilities who want to live independently in the community to learn how to become effective managers was a need which came out very clearly at our recent lifestyle seminar here in Edinburgh - SCTD report available to anyone interested). It seemed to me that the lesson the Gage Centre was learning and doing something about probably held true for many people with disabilities, especially at points of transition, and it may be that adult educationists and counsellors need to get together with say, independent living centre staff to plan and run workshops/residential experiences aimed at building self confidence, self esteem and assertiveness.

It will be clear from my brief "tour" around the facilities for adults with disabilities to learn about new technology that service providers are trying hard to make best use of each other's resources, and that some links are being made between providers of services to disabled people and providers of continuing education. From the consumer's point of view there remains the problem of finding out who is doing what and where and then processing and acting on that information to suit the consumers' own needs. The experimental government backed database for people with disabilities (DISC) may help: instead of being a "top down" database with service providers putting in the information they think people with disabilities need, it is a "bottom up" database built around consumers, who are disabled and who have a computer mode installed in their home and are then able to computer conference each other (phone call costs met by DISC) to share

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their collective experiences of problems and solutions and so build up, through their own recorded conversations, a database of information useful to people with disabilities.

At the launch of the Ontario Literacy campaign which I attended in my last week much was made of the establishment of an adult literacy network and it is likely that one aspect of this will be in database form, which should mean that at least non education service providers (if not consumers) will know where to go to find adult literacy provision. The fact that some kind of network is needed reflects the diversity and diffuseness of adult learning opportunities. These come (including opportunities to learn about computers) in all shapes and forms at the moment: from privately run commercial organisations like the Learning Annexe and Network for Learning which are aimed at the upwardly mobile middle classes and whose free weekly magazines advertising classes like "How To Buy Your First House" "50 Romantic and Unusual Things To Do In Toronto" sit next to the daily papers in street stands, to education funded classes based in schools, to outreach on the streets with street kids.

Literacy was a hot political issue during my visit. Both federal government and the provincial government of Ontario appeared to have only lately realised how high the number of functionally illiterate Canadians was. There was much press coverage of the subject and it was not by accident that the issue had become so topical. Adult literacy campaigners had been able to put a question on the level of literacy in Canada to the federal government via what is known as the Throne Speech, which is in effect a high profile statement of the government's intentions in the coming

year. This had ensured both maximum publicity for the issue and an open commitment from government to take action.

More than 1.3 million people in Ontario aged over 15 are unable to read and write at Grade 9 level (at least Grade 10 is needed for entrance to community college courses) was the statement at the Ontario Literacy Launch, at which Ministers from three provincial Government departments (Citizenship and Culture, Skills Development, Education) were present. Interestingly the smallest ministry present (Citizenship and Culture) was to be the lead ministry in the launch of new initiatives but I felt it was really the Skills Development Ministry (similar in function to our M.S.C.) which seemed the most powerful and was writing the agenda. Since my return, I have learned that responsibility for adult education no longer rests with the Ministry of Citizenship Culture but now is part of the Ministry of Skills Development, a move not dissimilar to changes going on in the U.K. where the Manpower Services Commission has taken over significant amounts of post 16 learning, and now appears to be saying in their new Adult Training Initiative that they have a major role to play in adult basic education. The question of who should decide the curriculum in any future adult basic education programmes (either in Canada or the U.K.) remains key. I digress.

The promotional literature for the Literacy launch refers specifically to the needs of people with disabilities to become self sufficient so, unlike Scotland where those with disabilities have not yet been targetted for attention by adult basic educationists, there is a recognition in Ontario that they may be a disadvantaged group when it comes to adult

learning needs. The government proposed adult literacy network will include a hot line, a database, but most importantly will create regional networks of people working in the field (either for school boards, colleges or community groups) backed up by local clearing house and resource centres, possibly operating from libraries, so that anyone with a literacy problem will know where to go for unbiased advice about what to do next.

Of the various adult education agencies I visited the simplest brief comment I can make was that I saw two distinct modes of operation, the curriculum centred mode where it is assumed the providers know what the adult needs to learn and it is therefore all written down in set materials or software which the adult works his way through, and the client centred mode where educators explore with individual clients what their particular needs are. The wholly Government funded Ministry of Education Independent Learning Centre fell into the first category. ILC is the oldest distance learning agency in Canada and in its early days in the 20s supplied essential teaching material to school pupils of school age and adults living in remote parts of the country: but in its approach to learners it seemed to have stood still and was now in the 80s still very paper dependent with, it seemed, minimal personal support for its distant learners. A distant learning computer awareness course was on offer but without the back up of a loaned machine or even suggestions about which local organisations e.g. local schools/colleges may have machines that could be used while doing the course (unlike TV Ontario's "Computer Academy" which sent out along with its course material, to all interested enquirers a comprehensive list of where they might be able to borrow/use a computer locally as well as the names of local folk prepared to support

learners while they followed the TV programmes;"warmware" as they called it').

Another curriculum driven adult basic education programme I visited was using Computer Assisted Learning as the means to reinforce basic skills; lots of drill and practice routines. This scheme uses PLATO software developed by Control Data and is funded by a community college and the Toronto Board of Education.

The Ministry of Citizenship and Culture funds adult basic education programmes of the community type and community colleges, forced by withdrawal of direct funding to themselves for their previously college based 'upgrade' courses, now are channelling that money to community based ABE schemes.

Adult education in Ontario was clearly experiencing something of an upheaval during my visit. The report "For Adults Only" commissioned by the Ontario government appears to be a key to understanding some the these changes. I am particularly grateful to staff at Frontier College for the time they gave me and the insights they provided into what was happening and what might happen in the future. An innovative adult education agency founded in the lumbercamps at the turn of the century and operating on the model of the "labour teacher" i.e. the teacher working and living alongside the learners, Frontier College definitely fell into the client centred category of adult basic education agencies. Staff at Frontier identified two major tensions in adult education in Canada at the present time and they were (1) the question of using volunteers as opposed to paid staff

(2) who determines the curriculum.

What struck me most about Frontier, apart from its emphasis on student centred learning, was its ability to market its wares successfully, particularly to the influential and the wealthy, many of whom now backed Frontier's work financially and politically. It seemed to me that Frontier's style of operation and philosophy and skills could be shared with some of those individuals and organisations I met who were working with people with disabilities (CILT, ACS, ESCI, MATP, COTA, the Gage etc) and who had identified that they needed to know how to develop opportunities for adults to become more skilled, not just in the basics of literacy and numeracy, but in managing their lives. This sharing need not be only an exchange of ideas and approaches between professionals but could also result in jointly planned and run opportunities for consumers to develop these skills as well as jointly planned statements and campaigns to highlight the existing lack of resources in this area.

To take one not necessarily "core" area, telecommunications technology could be in the future a tool both for distant learning and for connecting the nonvocal homebound (already ESCI is involved in a small project linking 4 homebound and Bliss computer users together in this way to set up an ongoing conversation and relationship). The dynamics of this new kind of interaction are not at all understood and any research done by adult educationists on the dynamics of interactive computer conferencing (and such research is being done at OISE) could be of interest to those working in the field of augmentative communication).

The best of adult education practice acknowledges that the empowerment of individuals is the ultimate goal. The best of augmentative communication practice shares this view. Much more remains to be done to build cooperative working links and create new interactions in order to meet the continuing learning needs of adults with disabilities, especially communication difficulties, in the community. In the end it is the adults themselves, as confident and articulate consumers, aware of their rights and voting powers, who will bring about improvements in service most rapidly.

In conclusion I would say that the single most significant lesson I learned during my stay was that service providers in any field should not be afraid to put the needs of the consumer, the client, first. If all of us really take that to heart then the traditional "professional" barriers will become completely unimportant in our efforts to provide cooperating and interdependently the particular set of resources any individual uniquely needs. "We need each others' breathing, warmth: surviving is the only way we can afford" (Margaret Attwood).

APPENDIX

I brougnt back many publications and papers to which I refer in my report which are too lengthy to include in the main body of the report but which can be obtained (with the exception of the first item below) from me at my home address. Some of the more important papers/publications are listed below.

I also have tapes of conversations with many of the people whom I met and I would be happy to lend these too.

SCTD Computer Load Service An Evaluation - available from SCTD, Queen Margaret College, Clerwood Terrace, Edinburgh EH12 8TS.

Obstacles)Secretariat for Status of Disabled Person)

Defining tne Parameters of Independent Living (COPOH).

Guide to the Assistive Devices Program (Ministry of Health, Ontario).

Funding and Service Delivery of Augmentative Communication Devices in Ontario: Canada: Status & Issues (Penny Parnes, Director ACS, 1987).

Application Form for ACS

Paucity of Appropriately Trained Professionals with Relevant Skills in Relating to the Provision of Communication Aids via the Assistive Services Program (Penny Parnes, Director, ACS).

Discussion Paper: Intensive Rehabilitation Services for Adults (Penny Parnes, Director ACS).

Position Paper on Assistive Service (Ontario Advisory Council on the Physically Handicapped).

Communication Awareness and Action Group leaflt.

MATP Review Report (Kathy Mann, Educational Consultant, ESA).

Proposal for Secretariat Enterprises (MATP Advisory Committee).

Profile of Disabled Persons in Canada (1986, Secretariat on Status of Disabled Persons).

Computer Volunteer Program (including Volunteer Job Description) DADA.

CONCLUSIONS

The conclusions I have reached fall into 3 broad categories: my first five conclusions are not specific recommendations for action directed at any specific body, but are general statements about the nature of service provision to people with disabilities which I hope will be accepted by any one involved in the field. The next five deal with augmentative communication and the last three with new technology awareness generally.

. the most significant handicap faced by people with disabilities is the attitude of others towards them. Very often non disabled people, including those responsible for key policy decisions and the allocation of resources to people with disabilities, hold negative attitudes born of apprehension, ignorance and most significantly lack of direct, personal, social contact with anyone with a disability. More frequent, high profile and positive use of the media (particularly television and the national press) is one way of giving people with disabilities opportunities to comment on their particular situations, which will reach the eyes and ears of planners and provide them with valuable insights into the nature of day to life for individuals who happen to have disabilities.

. while services to people with disabilities remain largely in the hands of non disabled people all providers of such services need to take responsibility in their own particular field for providing those who control their budgets and policies with frequent and continual incidental opportunities to meet directly with those to whom services are provided.

- ultimately, radical and rapid improvements in the nature and delivery of service provision to people with disabilities, will only occur when the individuals themselves, the consumers, are enabled (and allowed) to become confident and articulate advocates on their own behalf. Part of this process will involve service providers shifting their view of their role significantly so that instead of doing things for and to people with disabilities, they see themselves as one of a range of community resources upon which the consumer can draw. Such a shift in attitude will mean significant changes need to take place in the structure and delivery of services so that they can become truly client centred.

- in the UK, the consumer movement is not strong. Recent legislation, the Disabled Person's Act 1986, represents a significant shift in attitudes towards people with disabilities and gives rights to the individual to request a statement from local authorities as to how his/her needs are seen and will be met. However much needs to be done by those with disabilities and those working with them/living with them who are aware of this legislation, to find ways of educating others who are unaware, and to find ways of building the confidence and self esteem of individuals with disabilities, so that they can exercise their rights effectively.

- in the UK, there is, unfortunately, no such thing as the Canadian Bill of Human Rights and Freedoms. This makes the task outlined above doubly difficult because there is limited collective experience of individuals and groups in the general population successfully testing their rights under law. The existence of a Bill of Rights in Canada has done a great deal to strengthen the position of people with

disabilities.

. everyone involved in the field of augmentative communication (consumer/provider) should be responsible for taking every opportunity, locally and nationally, to press home the simple message that the right to communicate is an essential human right, as important as the right to adequate food and shelter and vital to any attempt to live independently. In particular, in the U.K., much work of this broadly educational kind needs to be directed at those responsible for allocation of resources in the education, social work and, most significantly, health fields. One of the problems augmentative communicators (or potential augmentative communicators) face is the ignorance, not just of professionals directly involved with them, (see below) but of policy makers who maybe do not even know they do not know about augmentative communication. Advocacy groups for those with communication impairment should be encouraged (along the lines of the Toronto Communication Awareness Action Group): every opportunity should be provided to allow augmentative communicators to do their own advocacy and run their own presentations (like the Susan Wilson project run by Easter Seal): Centres like CALL, SCTCI, and FACCT could consider producing, in video form, using consumers with their consent and in cooperation with other agencies e.g. S.C.T.D., a statement about the needs of individuals with communication impairments and how these needs can be met and what it means in terms of resources and service delivery. Such a video (or a series of videos dealing with specific issues e.g. funding difficulties/lack of ready access to continuing education etc) could be shown to the joint planning groups (in which Education needs to feature more prominently) of regional authorities as well as to the Committee for Special

Educational Needs Sub Committee on microcomputers. Centres like CALL, SCTCI, FACCT and voluntary organisations like SCTD, Scottish Council for Spastics and others could try establishing some kind of advocacy network of parents/carers/communication impaired individuals. The role of the Centres and the voluntary bodies, in theory should just be to get such a group off the ground. After that the group should write its own agendas, clarify its role and use the resources of Centre staff/voluntary sector staff to advise and support it en route.

- the lack of inservice and preservice training for professionals involved in this field (speech therapists), occupational therapists, physiotherapists, teachers, social workers, doctors, psychologists) needs to be urgently addressed by both the training bodies and professional associations. In the meantime maximum use should be made of existing resources in terms of skilled personnel, and initiatives like the CALL Centres seminar series need to be encouraged (and resourced). Secondments of key personnel on attachment to existing centres should also be continued in order to build up around the country some kind of network of interested individuals from different professional backgrounds. The national special interest group should continue to meet to act as a focus for such a network of practitioners. A range of awareness raising or training sessions needs to be available e.g. residential workshops, day seminars, distance learning material in written and visual (and software?) form to cope with the geographical and financial difficulties involved in releasing staff. Some of the sessions need to be available on a regular and predictable basis so that individuals know they are there and can slot into them when they are free to do so. Other sessions may be "one offs" geared to the needs of a particular group at a particular time.

- there is a particularly urgent need in Scotland (which has had no SEMERCS and no project like Peter Fowlers IT & FE Project) to address the awareness needs of those working in further and continuing education (at any level, from basic education to degree level study). Many of these staff know very little yet about the potential or use of augmentative communication devices and yet many would have much to contribute from their experience in helping adults to learn. Perhaps some kind of educational support programme of the type run by Easter Seal is needed in Scotland by educators in the post 16 field. Many young augmentative communicators (or older ones who have never been able to communicate, and therefore to learn and express themselves) need much more time to develop basic literacy and numeracy skills and 18 (the usual age at which any rights to special educational provision ceases) is an unrealistic cut off point.

- relating to the point above, those professionals and others working with augmentative communicators need to do so cooperatively. The nature of this area of work, philosophical issues aside, demands that the client be at the centre of it, and no one discipline will have all the solutions to the client's needs. What is needed is a number of multidisciplinary teams, based around local resource and assessment centres, which have the power and the budget to both assess for and deliver the goods. Such teams, as well as improving the quality of source to the client, could do much to train and teach others by their constant cooperative sharing clients problems. It should be clear, too, to all involved whether such resource and assessment centres offer:

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(a) the same range of services to everyone in a particular geographic area or

(b) different services to different client groups depending on the clients needs rather than geography (as in Ontario, where there is a hierarchy of approved clinics and service providers).

- such centres should consider ways of offering a short term residential facility for those living distantly. In Ontario the local Rotary ran a small residence in the grounds of ACS. At the moment in Scotland I am not clear (and this may be my own fault) when someone would be best served by CALL and when by SCTCI and The Dundee University, Fife Assessment Centre pilot projects appear to service only small numbers in "closed user" groups.

- a typical multidisciplinary team approach could involve speech and occupational therapists and a physiotherapist along with a teacher and a technician and an engineer. Staff members could then be referred to as "instructors/consultants", along the lines of ACS, to reinforce the cross disciplinary nature of the work. Already the framework exists for such centres with the existence of CALL, SCTCI, the Dundee & Fife Projects. Already in certain areas there are local ad hoc 'special interest groups' meeting to share across disciplines. It need not cost a great deal to establish a network of multidisciplinary resource and assessment centres: a great deal could be achieved by "rejigging" existing resources in terms of budget and personnel. The regional joint planning mechanisms in which Education must begin to take a fuller port would be one way to achieve this.

- such centres could then become the focus for support or establishment of local special interest groups of professional and others and advocacy groups. They could also in their own areas address ways of unlocking their expertise to others through a variety of training sessions as described earlier. The sub committee of COMSEN could play a significant role in:

a) enabling existing centres to move towards a network of provision of the kind outlined above and

b) ensuring a coordinated approach at a national level to issues like training.

- in the meantime, existing centres involved in assessing the needs of augmentative communicators could consider the appropriateness to their service of key principles of the work in Ontario e.g.:

i) once a client is referred to a centre he/she remains on that centre's "books" and is never a "closed" case

ii) all clients and their families are allocated a "named consultant" as their point of reference with the service from the first point of contact

(iii) equipment could be <u>purchased</u> by centres (out of <u>jointly</u> funded budgets?) and then <u>leased</u> to the individuals on certain conditions. Centres would then as a matter of course establish vigorous "self examination" criteria of the kind outlined in

the report to ensure credibility and accountability

(iv) facilitators should be identified at an early stage for clients. These facilitators should then be obliged to attend training and support sessions appropriate to their needs and the client's needs (see report). This raises an interesting question. Generally speaking ACS deals with children and young people so, generally speaking, parents or teachers are usually the facilitators. It will be necessary to pay some attention to the question of who makes an appropriate facilitator for an adult client and who identifies that facilitator. However, the principles of regular accessible centre based support to facilitators remains valid.

- looking at ways adults learn about new technology generally, providers of open learning material related to computer based skills, should consider computer leasing schemes, so that people are not barred from such courses because they either do not have their own machine or cannot get into or access the ones made available at learning centres. Providers of wholly centre based courses should consider the accessibility of where they site such courses in their buildings and both should actively and positively market such courses to people with disabilities, using the voluntary sector network as a start.

- high quality software (of the content free, framework type developed by SEMERCS) needs to be developed for adult learners with special needs in the same way in which the best of SEMERC software developed i.e. by close cooperation between teachers (adult basic education or further education staff) and software writers. Involving adult

educators in this process will be one way to increase their understanding of this area. Funding needs to be made available for innovative work in this area.

- the Manpower Services Commission could consider rejigging its funding of the capital purchase of computer systems for people with disabilities who will work from home so that the individual and not the employer owns the equipment.

- much more imaginative use could be made of existing resources (e.g. the school and college computers which lie idle during the holidays) to bring more adults up-to-date with the potential of new technology for them. Summer residential/day schools could be run by colleges/schools and positively marketed to people with disabilities.

- in the meantime, no one should pretend to have all the answers, and we should all be honest about the particular area of expertise we have and the areas of ignorance we suffer: when referred to for help, we should act as honest brokers to other appropriate agencies and help the individual through the maze.

The Hugh MacMillan Medical Centre
Operated by the Ontario Crippled Children's Centre

AUGMENTATIVE COMMUNICATION SERVICE

Facilitator Training

"Establishing Basic Communication"

AGENDA

****

AM: Introduction

What is Communication?

Why do we Communicate?

Expression of Needs and Wants

- cause and effect
- choice making
- initiating requests

LUNCH

PM: Social Interaction

- turn taking
- sharing activities and information
- greetings/closings

Beyond Choice Making

- vocabulary development

Facilitator Strategies

Goal Setting

Evaluation

Bathurst Road Toronto Ontario M4G 1R8 Telephone 416 425 6220
Registration Number 0332777 10 13

The Hugh MacMillan Medical Centre
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AUGMENTATIVE COMMUNICATION SERVICE

Facilitator Training

"Developing Communication Skills"

AGENDA

AM:	Introduction
	What is Communication?
	Why do we Communicate?
	Communication is Multi-Modal
Coffee	
	Making Communication Meaningful
	- turn taking
	- expecting more
	- asking questions
LUNCH	
PM:	Ensuring that your child has ways to communicate
	Coping with Communication Breakdown
Coffee	
-	Modelling/Prompting Techniques
-	Discussion/Questions

[illegible] Ramsay Road Toronto Ontario M4G 1R8 Telephone 416 425-6220
[illegible] Registration Number [illegible]

The Hugh MacMillan Medical Centre
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AUGMENTATIVE COMMUNICATION SERVICE
Computer Facilitator Training

AGENDA for PARENTS

DAY 1:

AM:
- Introduction to Participants
- Introduction to the Apple - Inside the Apple
- Care of the Systems
- Trouble Shooting

- Printshop - on Keyboard

LUNCH

PM:
- Magic Slate
- Mapwriter - Big Type and Talk
- Blissapple
- Special
- Other Software

DAY 2:

AM:
- Adaptive Firmware Card
- Talking Unicorn
- Communication Software
- Recreational and Educational Software

LUNCH

PM:
- Small Group Review
  - Magic Slate
  - Other Software
  - Blissapple
  - AFC

- Adjourn

350 Rumsey Road Toronto Ontario M4G 1R8 Telephone 416 425-6220
Income Tax Donation Registration Number 0333277 10 13

The Hugh MacMillan Medical Centre
Operated by the Ontario Crippled Children's Centre

AUGMENTATIVE COMMUNICATION SERVICE
Computer Facilitator Training

AGENDA for PROFESSINALS

DAY 1:

AM:	Introduction to Participants Inside the Apple
Coffee	
	Introduction to Mapwriter, Big Type and Talk, Magic Slate and Master Types' Writer
LUNCH	
PM:	Introduction to the Adaptive Firmware Card and the Talking Unicorn with Votrax
Coffee	
	Introduction to Communication Software and the Adaptive Firmware Card (Blissapple, Print Shop, Story Machine and Kidwriter)

DAY 2:

AM:	Individual Review Adding and Changing Blissaple Vocabulary
Coffee	
	Blissapple with Adaptive Setups
LUNCH	
PM:	Review Software Wrap-up

350 Ramsey Road Toronto Ontario M4G 1R8 Telephone 416 425-6220
Charitable Tax Deductible Registration Number 0333277 10 13

AUGMENTATIVE COMMUNICATION TRAINING SEMINARS FOR EDUCATORS

Easter Seal Communication Institute

CLASSROOM DYNAMICS

General Orientation for those with an augmentative communicator in the class. JUNE 10

Classroom Dynamics with Augmentative Communicators OCTOBER 7

Student Interaction with Augmentative Communicators NOVEMBER 4

CURRICULUM CONSIDERATIONS

Curriculum Adaptations for Augmentative Communicators MARCH 3

Programming with an Augmentative Communicator in the Class SEPTEMBER 17

GRAPHIC COMMUNICATION SYSTEMS

Graphics for Augmentative Communication APRIL 27

Graphics – Sets and Systems AUGUST 21

LANGUAGE ARTS

Language Arts and Augmentative Communication OCTOBER 6

Reading through Blissymbolics – A Structured Approach NOVEMBER ~~12~~ 23

Reading – The Transition from Blissymbols to Print NOVEMBER ~~13~~ 24

BLISSYMBOLICS

Practicum to Blissymbolics Independent Study Program MARCH 4 OCTOBER 5 NOVEMBER 6

Elementary Blissymbolics Workshop AUGUST 17-19

Blissymbols and Technology AUGUST 20

SPECIAL TOPICS

Arranged throughout the year on topics of interest to educators of augmentative communicators.

Educator's supportive utilization and inclusion of the augmentative communicator's communication system components

- ensuring that classmates and significant others in the school and community understand and appreciate the communication system's components and the strategies involved in their effective use.
- recognising their roles and stimulating varied uses of the communication system's components.
- supporting the augmentative communicator in learning to balance and to concurrently and appropriately use the communication system components of his/her unique system
- adapting the curriculum in order to include and apply the communication system's components to the benefit of the augmentative communicator and other students in the school.
- educating in the school, family and community for acceptance of augmentative communicators.

Educator's contribution to augmentative communicator's assessments

- knowledge of student's cognitive language, social and academic stages of development.
- knowledge of student's learning style.
- knowledge of student's interest and behaviours.
- knowledge of diagnostic and teaching approaches to respond to student's strengths and limitations.
- knowledge of social relationships and classroom dynamics.
- knowledge of family, school and community support systems.

Educator's role in augmentative communicator's communication learning programs

- plan toward goal of communication competency within total learning program.
- in collaboration with augmentative communication specialists and family, share the planning of communication learning program with the augmentative communicator.
- take responsibility for implementing day-to-day learning program directed toward increased communication competency and expanding control by the student.
- take responsibility, in partnership with augmentative communicator, for day-to-day additions and adjustments to student's communication system.
- in co-operation with family, ensure that augmentative communication assessments are applied as far as needed.